Testimony before the

Subcommittee on Water Resources and Environment

“Twenty-First Century Water Commission Act of 2007”

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Complete Statement

of

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before

The Subcommittee on Water Resources and Environment
Committee on Transportation and Infrastructure
United States House of Representatives

on

H.R. 135, The Twenty-First Century Water Commission Act of 2007

November 8, 2007

INTRODUCTION

Madam Chair and Distinguished Members of the Subcommittee:

Thank you for the opportunity to testify before you on H.R. 135, "The Twenty-First Century Water Commission Act of 2007." I am testifying today in my capacity as Deputy Executive Administrator for Planning at the Texas Water Development Board (Board). The Board is the state agency charged with collecting and disseminating water-related data, assisting with regional water planning, and preparing the state water plan for the development, management, and conservation of Texas' water resources. The Board also administers cost-effective financial programs for constructing water supply, water infrastructure, wastewater treatment, flood control, and agricultural water conservation projects.

Of the several financial assistance programs the Board administers, two major programs are funded in part by federal grant money, the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund. The Board's Clean Water State Revolving Fund is the second largest State Revolving Fund in the nation, with $4.9 billion in cumulative loan commitments. The Board's Drinking Water State Revolving Fund, established in 1996, has provided more than $743 million in cumulative loan commitments.

Please allow me to take a minute to thank Chairwoman Johnson for her strong support of Texas water issues and of the Board, in particular. This subcommittee, along with Committee Chairman Oberstar, has been and

continues to be extremely receptive and accommodating to the Board's insights on water resources policy of benefit to Texas and the entire nation. It is an honor and privilege for the Board to maintain a supporting role to the subcommittee.

The subcommittee's serious consideration of water supply issues is particularly commendable. Drought is a way of life in the western United States, and now water supply concerns are making news across other parts of the country as well. The impact of drought on water supplies is increasingly relevant in places like Baltimore, Atlanta, parts of North Carolina, and the rest of the southeastern United States. Water supply is a national concern.

In the last 50 years, Texas has experienced a series of regional droughts and two major statewide droughts, the severity of which prompted unprecedented action by the Texas Legislature to ensure that the future water needs of all Texans are met. My initial remarks will describe Texas' experiences during the droughts of the 1950s and 1990s, focusing on the 1990s, and how Texas responded by establishing a comprehensive, bottom-up regional water planning process. This summary will be followed by a brief discussion on some of the successes Texas has achieved as a result of this bold approach to water planning. I will also present some specific water supply challenges and conclude my testimony with suggestions on how the federal government can continue to be an active partner with us in our quest to meet the future water supply needs of Texas.

BACKGROUND

Texas began statewide water planning in earnest after the drought of the 1950s, still considered the drought of record for most regions in Texas. Although the drought ended in 1957, its devastating effects on the Texas economy, particularly in the agricultural sector, where ranch debt climbed above $3 billion, prompted the Texas Legislature to create the Texas Water Development Board (Board). The voters of Texas subsequently approved a constitutional amendment authorizing the Board to administer a $200 million Water Development Fund to help communities develop reliable water supplies.

Since that time, the Board has prepared and adopted eight state water plans—in 1961, 1968, 1984, 1990, 1992, 1997, 2002, and most recently in 2007. The 1961 and 1968 plans consist of early attempts to describe the state's water resources, to quantify future water needs, and to propose water supply projects to meet those needs. The 1984–1997 plans document an ever-increasing focus on a rapidly growing demand for water supply, the need for increased water conservation, and the importance of environmental issues.

Development and adoption of the 1997 State Water Plan coincided with a major drought in Texas. By the end of 1996, drought conditions in the state were on their way to causing an estimated $5 billion in losses for agricultural and agriculturally related industries. **These devastating losses and the anxiety experienced by communities across Texas threatened by water supply**

shortages provided the catalyst for a fundamental paradigm shift in Texas water planning—from a centralized to a decentralized process in which the primary responsibility for water supply planning was shifted from the state to regional and local government levels.

This change in the way Texas approached its water planning was mandated in Senate Bill 1, the landmark water legislation passed by the Texas Legislature and signed into law in 1997 by then-Governor George W. Bush. Senate Bill 1 greatly increased public participation in water planning by implementing a bottom-up local and regional planning process that emphasizes conservation, increases protection of the environment, and promotes voluntary water transfers through marketing. The first cycle of regional water planning was completed in 2002, on time and under budget at $19.1 million. Senate Bill 1 requires that both the regional and state water plans be reviewed and revised as necessary on a five-year cycle in order to adequately address changing conditions in demographics, water supplies, and new technologies. The second cycle under the Senate Bill 1 planning process was completed on January 5, 2007.

As part of the initial regional water planning effort in 1997, the Texas Legislature directed the Board to designate regional water planning areas and develop guidelines for the planning process. After substantial collaboration with local and state groups, the Board created 16 planning areas, each represented by a regional water planning group (planning group). Senate Bill 1 assigned the Board the task of selecting the first members of these groups. We selected the members from the 11 specific interests identified in Senate Bill 1, including, but not limited to, the general public and representatives of counties, municipalities, industries, agriculture, the environment, small businesses, electricity-generating utilities, river authorities, water districts, and water utilities. We also sponsored public meetings and workshops through the state to develop the planning guidelines that serve as the structure for the regional planning process.

For the 2007 State Water Plan, the 16 planning groups eventually included approximately 350 voluntary representatives with a broad array of interests, including the 11 interest group categories specifically required by statute. They worked for more than four years to develop their regional water plans and held several hundred public meetings across the state. Planning group members spent thousands of hours and traveled as many miles to create these plans.

Senate Bill 1 requires planning groups to address the needs for a 50-year planning horizon of *all* water users in their regions. If current supplies do not meet future demand, the planning groups must recommend specific water management strategies, such as water supply projects, to meet near- and long-term needs. The planning groups, with assistance from the Board, assess the social and economic impact of not meeting those needs and are required to note and explain the conditions that led to the inability to meet an identified need.

Throughout the planning process, joint meetings between the planning groups serve both to coordinate water management strategies and also to circumvent future potential conflicts arising over the use of shared resources. When appropriate, planning groups coordinate their planning efforts with those of neighboring states and the Republic of Mexico. Because certain water management strategies, such as the development of a large reservoir, could satisfy needs in more than one region, the planning groups are encouraged to form subregional water planning groups and to hold joint regional meetings.

As with its predecessor, the 2002 State Water Plan, the 2007 plan was prepared on the basis of the 16 regional water plans. Key findings of the 2007 State Water Plan are as follows:

- The population of Texas is expected to more than double in the next 50+ years, from nearly 21 million in 2000 to about 46 million in 2060.
- Water supplies from existing sources are expected to decrease 18 percent, from 17.9 million acre-feet per year in 2010 to 14.6 million acre-feet per year in 2060.
- Although statewide per capita water demand is projected to decrease over the 50-year planning period, total demand for water is projected to increase 27 percent, from nearly 17 million acre-feet in 2000 to 21.6 million acre-feet in 2060.
- **If the state does nothing to increase water supplies, about 85 percent of the state's projected population will not have enough water by 2060 during drought conditions.**
- Total capital costs of implementing all of the 4,500 water management strategies included in the 16 regional water plans are approximately $30.7 billion. Total capital costs of water supply, water infrastructure, wastewater treatment, and flood control through 2060 in Texas are now estimated at approximately $173 billion.

SUCCESSES ACHIEVED WITH NEW APPROACH

Texas' commitment to establishing the regional water planning process has resulted in truly remarkable success. This success became evident when *Water for Texas—2002*, the first comprehensive state water plan to be adopted using the regional water planning process, was published. The goal of *Water for Texas* was to provide a water plan that, if implemented, would meet the needs of all Texans, even during conditions of drought. Although some needs may remain unmet today, the degree to which this plan has achieved its goal is unprecedented. Texas is proud of this achievement and rightfully so—it took a lot of hard work by a lot of people, much of it voluntary, to make this happen.

Texans realize, however, that the true measure of success is not the publication of a water plan, but whether this new regional water planning approach can

produce real solutions to the water supply challenges facing our state over the next 50 years and beyond. Major water management strategies, such as the Lower Colorado River Authority/San Antonio Water System's Off-Channel Reservoir Project, the Kerr-McGee Pipeline Project, the Kay Bailey Hutchison Desalination Plant in El Paso, and the significant increase in developing and relying upon water conservation, both municipal and agricultural, are all excellent examples of successful implementation of locally and regionally developed water plans.

CHALLENGES FOR THE REGIONAL WATER PLANNING PROCESS

The water management strategies that have already been implemented or are in the process of implementation have demonstrated how Texas is using the regional water planning process to develop potential solutions to water supply challenges and to move these solutions toward implementation. We fully expect the regional water planning approach to continue to result in new solutions as the process and institutional framework mature. There remain, however, a number of water supply challenges that will test the mettle of this new approach. Following is a discussion of the most visible issue to present a challenge in Texas.

Reservoir Development

A progressive de-emphasis on building new reservoirs in Texas is evident in both historical reservoir development patterns and chronological editions of Texas' state water plans. Texas now has 196 major reservoirs (more than 5,000 acre-feet of conservation storage capacity), with only one of these existing before 1900. By 1950, Texas had constructed approximately 62 major reservoirs, although development was most prolific between 1950 and 1980, when the number grew to a total of 184. The pace of construction began to slow in the 1970s and has since slowed considerably as a result of environmental issues, increasing costs of reservoir development, and the reduced number of potentially high-quality reservoir sites. Over time, Texas' state water plans have reflected this slowdown in reservoir development. The 1984 State Water Plan identified 65 major reservoir sites. In contrast, the 1997 and 2002 State Water Plans each recommended only eight major reservoirs to meet needs for additional water supplies through 2050. Emphasis on conservation, reuse, and other alternative water management strategies lowers the state's reliance on new, large-scale reservoir projects.

Texas recognizes, however, that large-scale reservoir projects must remain a strong and viable tool in our water development toolbox if the state is to meet its future water demands. This recognition was most clearly demonstrated during the last session of the Texas Legislature (80th Texas Legislature from January–May 2007) when legislators designated 19 sites as unique sites for reservoir construction. This designation of unique reservoir sites, a major component of Texas Senate Bill 3, prevents political subdivisions of the state from taking any actions that would significantly prevent the construction of a

reservoir. Although Texas recognizes that this major provision of Senate Bill 3 has no direct bearing on an action by the federal government, it is hoped that these designations will be a clear and definitive message to federal agencies with regard to what Texas plans for these sites.

There are a number of major issues associated with maintaining the viability of the large-reservoir option. Proposed large-scale reservoirs are frequently associated with interbasin transfers of surface water, which present certain difficulties that must ultimately be overcome through the permitting process. Constructing proposed reservoirs will also be problematic because of opposition from residents who will be affected, timber companies and other landowners, and environmental groups.

RECOMMENDATIONS ON THE APPROPRIATE FEDERAL ROLE IN WATER PLANNING AND IMPLEMENTATION

By 1997, Texas had maintained a formal, centralized water planning process for more than 40 years. Yet the impact of a statewide drought in the 1990s served to illustrate two fundamental deficiencies. First, there was little or no public awareness of how critical the need was for additional water supplies. Second, the level of implementation of projects recommended in the state-developed water plans was not sufficient to meet future, and in certain cases, current water supply needs.

One of the most basic theories developed to explain this lack of implementation was that water supply project sponsors, typically cities and communities, were not involved in either the planning process or in the selection of projects to meet future needs for water supply. In many cases, there was not even the fundamental recognition of a need for additional water supplies. The Texas regional water planning process involves local governments not only in water planning but also in selecting recommended projects. The involvement of local interests has resulted in significant improvements in both of these areas. First, public participation and awareness have increased well beyond even the most optimistic expectations. Second, the implementation of water management strategies and projects recommended to meet future water supply needs is moving forward at a pace not experienced in Texas since the late 1970s and early 1980s.

Therefore, as Congress considers efforts such as those envisioned in H.R. 135, using the Texas experience as an example, it is crucial that certain principles be followed.

First and foremost in terms of a national water policy, I encourage Congress to discuss and determine the appropriate federal role in managing and developing water supplies. I say this with some trepidation, as the members of the subcommittee are keenly aware of the states' unflinching stance on state primacy over water resources. Yet, the piecemeal approach cobbled together by various federal agencies hinders our ability to fully use federal assistance on water

supply issues. This is especially true when one considers the significant federal legislation, such as the Endangered Species Act, the Safe Drinking Water Act, and the Clean Water Act, that local project sponsors will be required to address as they develop their projects. This is why the Texas Water Development Board has initiated discussions with our federal partners, most notably the U.S. Army Corps of Engineers, to convene a national forum on "What is the appropriate federal role and investment in water supply?" The Board has had constructive discussions with Assistant Secretary of the Army for Civil Works, John Paul Woodley, Jr., about this very topic. Similar preliminary discussions are ongoing with the Environmental Protection Agency through our participation on the National Advisory Council on Environmental Policy and Technology. We hope to generate a gathering of federal, state, and local leaders to determine an effective and efficient way forward on water supply issues. I hope the subcommittee will support the idea of a national forum on this issue.

Another principle for this subcommittee to consider in its water legislation is the value of a collaborative process. There must be significant, meaningful public participation by the entities that will be responsible for implementing any potential recommendations. If local, regional, and state governments are not afforded an opportunity to participate in the planning contained in H.R. 135 or similar initiatives, then chances for implementation will be significantly reduced. **Judging by Texas' regional water planning experience, the most appropriate and effective role for the state has been in (1) establishing planning guidelines, (2) providing technical support, (3) resolving interregional conflicts regarding use of existing or planned supplies, and (4) providing funding necessary for the planning effort. These four areas of involvement in the planning process by state agencies in Texas, such as the Board, serve as an excellent template for the appropriate role for the Commission proposed in H.R. 135.** In our regional planning process, state input to the planning groups on water management strategies has been limited to three roles: technical assistance during the assessment of water demands and supplies, technical review to ensure that planning guidelines have been followed, and oversight to ensure that no interregional conflicts exist. To extrapolate our experience to the federal level, the Commission, should it come to fruition, should fulfill a similar role, deferring to the states on matters clearly recognized as being within their primacy, yet providing the coordination, technical assistance and oversight needed so that an integrated, comprehensive analysis with any necessary policy recommendations may be presented to Congress.

A third principle the subcommittee should consider for H.R. 135 is the importance of accurate, timely data. Since 1997, Texas has invested approximately $36 million in the regional water planning process and another $20 million to collect and analyze basic surface and groundwater data. This data allows us to calculate current supplies and make projections for the availability of future supplies to meet needs over the next 50 years.

Data needs are enormous in this type of planning. This is because the local and regional planners, who will also be the project sponsors, understandably insist upon having adequate and reliable water data on which to base their funding decisions. Thus, the dearth of data across the country can be a potential obstacle for a national assessment. I have had the privilege of consulting with numerous states throughout the country on the Texas planning model (from California to Pennsylvania and several states in between), and I have concluded that few if any of these states possess the volume and quality of data necessary to build a solid plan. The cost and time required to develop data is an important consideration as you deliberate on the implementation of a national assessment as proposed in H.R. 135. Clearly, the $9 million authorized will not be adequate to conduct a water demand and supply analysis for the nation at anything but the most cursory level. Based on the Texas experience, Congress will be very skeptical of any recommendations that the Commission may develop based on such a superficial analysis, and thus the value of such an effort will be minimal at best.

I appreciate the opportunity to offer insights on water supply planning and implementation. I hope I have been able to provide a clear picture of how our planning approach in Texas has succeeded, and how it can be translated into a national effort. I am available for your questions.

Thank you.